

## Instructions for final presentations

All presentations will be 10 minutes long, with 5 minutes for questions.

A written report (no more than two pages long, two-column format, Times 10 font, JACS communication style) should also be submitted.

### **Important Considerations for the written report and oral presentations:**

#### Introduction:

What is the biological activity of the natural product you have selected? How was it isolated/ what organism was it isolated from? Why would anybody want to undertake a synthesis of this compound?

#### Discussion:

Retrosynthetic analysis: what are the major bond disconnections?

Is the proposed synthesis convergent or linear?

What is the longest linear sequence of steps in your synthesis?

Are all of the starting materials for your synthesis commercially available (check Aldrich catalog)?

Are the yields of the carbon-carbon bond-forming reactions expected to be high?

What measures will you take to ensure that the proper stereochemistry is obtained?

What factors control the stereochemical outcome of your reactions?

Are there alternative pathways available for intermediates in case one or more of your key steps fail (how flexible is your synthesis)?

Is the use of protecting groups minimized in your synthesis?

#### Conclusion:

What is the overall yield of your synthesis, taking into account the longest linear sequence of steps?

Is your proposed synthesis viable in terms of making reasonable (>1 g) quantities of your natural product?

#### References:

Remember to include references from the literature both for the major synthetic steps and also for the source compound. The more references, the better.

#### Chemdraw Figures/Schemes for report and presentation:

Figure 1: structure of natural product (and other members of the same family of compounds)

Scheme 1: Retrosynthetic analysis, showing major bond disconnections and smaller derived fragments. Take the analysis back to commercially available starting materials.

Scheme 2: Synthetic scheme part I: detailed, step-by step synthesis proceeding from commercially available starting materials

Scheme 3, Scheme 4, etc. continuation of proposed synthesis.

## Grading Rubric for Final Presentation

Name: \_\_\_\_\_

Natural Product: \_\_\_\_\_

### Grading:

Scale: 1=inadequate, 2=marginal, 3=good, 4=very good, 5=excellent

<b>Category</b>	<b>Score</b>	<b>Comments</b>
1. Background/Introduction (Purpose/reason for choice of target structure clear)		
2. Overall Organization (visual clarity of structures and text, facility with Powerpoint & ChemDraw)		
3. Logic of chemical sequence (reasonableness and flexibility of chosen route; linear vs. convergent)		
4. Overall clarity of oral presentation: logical explanations, understanding of chemical concepts handling of audience questions.		
5. Overall quality of report (ACS JACS communication style + supporting references)		

**Total** \_\_\_\_\_ **/25**

**X6=** \_\_\_\_\_ **/150**